

**LIST OF COMMON SOLVENT USES MATCHED TO ESIG Generic Exposure Scenario (GES) TITLE WITH EXAMPLES OF RELEVANT SOLVENT TYPES**

GES (Use) TITLE (alphabetical)	GES title phrase code	GES Number	END-USE APPLICATIONS	EXAMPLES (not an exhaustive list)	EXAMPLE HYDROCARBON SOLVENTS CATEGORIES TYPICALLY RELEVANT FOR USE (not an exhaustive list) - see Note 1	EXAMPLE OXYGENATED SOLVENTS CATEGORIES RELEVANT FOR USE (not an exhaustive list) - see Note 1	PC code
Use in Agrochemicals	11133171107	11	Biocidal protection products	E.g. Carriers, co-solvents, Coupling agents, emulsifiers in plant protection products, pesticide/ insecticide formulations,	1, 2, 7, 8, 9	Ketones; Alcohols; Glycol ethers/esters	8
			Insecticides	E.g. Carriers, co-solvents, coupling agents, emulsifiers in plant protection products, pesticide-, insecticide formulations,	7, 8	Ketones; Alcohols; Glycol ethers/esters	27
			Plant protection products	E.g. Carriers, co-solvents, coupling agents, emulsifiers in plant protection products, pesticide/ insecticide formulations	1, 2, 7, 8, 9	Ketones; Alcohols	27
Use as Binders and release agents	10133224455	10	Foundry mould release products	E.g. Anti-set-off, anti-adhesive or release agents for foundry purposes (solvents for coatings applied to (sand) moulds	1, 2, 6, 7, 8, 9	Ketones; Alcohols	24
			Mould release agents	E.g. Anti-set-off, anti-adhesive or release agents, e.g. concrete release agents	1, 2, 6, 7, 8, 9	Alcohols	24
Use in blowing agents	10133224454	9	Blowing agents	E.g. Blowing agents in manufacture of e.g. polystyrene	5	Ketones	32
Use in Cleaning Agents	11133171103	4	Cleaning products	E.g. Substance used in detergents, metal (parts) cleaners, electronic cleaners, laundry cleaners, degreasers etc.	7, 8	Ketones; Alcohols; Glycol ethers/esters	35
			Degreasing formulations	E.g. Substances used in Engine (parts) cleaning, brake cleaning, metal degreasing formulations	6, 7, 8	Ketones; Alcohols; Glycol ethers/esters	35
			Dry cleaning formulations	E.g. Solvents in dry-cleaning formulations	8	n/a	35
			Solder flux removal products	E.g. Electronic parts cleaners	6, 7, 8	Ketones; Alcohols; Glycol ethers/esters	38
			Wipes	E.g. Wipes for cleaning purposes	7, 8 Toluene, Xylene	Ketones; Alcohols; Glycol ethers/esters	35
Use in Coatings	11133171102	3	Adhesives	E.g. Solvents, fillers, plasticisers, emulsifiers, dispersants in e.g. adhesives	1, 2, 6, 7, 8, 9	Ketones; Glycol ethers/esters	1
			Inks	E.g. Carriers for all types of water and solventborne inks.	1, 2, 7, 8, 9	Glycol ethers/esters	18
			Metal surface treatment products	E.g. Anti-corrosion-protection oils, other surface treatment products, temporary coatings	8, 9		14
			Non-metal surface treatment products	E.g. Anti-corrosion-, protection oils, other surface treatment products, temporary coatings wood protection oils, parquet oils	8, 9	n/a	15
			Paint removal products	E.g. Carriers in paint stripper formulations	1, 2	Ketones; Glycol ethers/esters	9a
			Paints	E.g. Substances used in Bitumen linings or lacquers, paints, Inks, stains, varnishes, primers	1, 2, 3, 6, 7, 8, 9	Ketones; Alcohols; Glycol ethers/esters	9a, 9b
			Plastisols	E.g. PVC plastisols for wallpaper, coatings for construction materials	8	n/a	9a
			Parquet oils	E.g. Coalescence, carrier, emulsifiers, dispersants for all types of Parquet oils	8	n/a	9a
			Polish & wax blends	E.g. Carriers emulsifiers, dispersants in shoe polish, car wax, floor and furniture polishes, other surface treatment products	1, 2, 7, 8	Alcohols; Glycol ethers	31
			Putties	E.g. Carriers, fillers, plasticisers, emulsifiers, dispersants in sealants / putties	8, 9	Ketones; Glycol ether esters	9b
			Sealants	E.g. Carriers, fillers, plasticisers, emulsifiers, dispersants in sealants / putties	8, 9		9b
			Thinners	E.g. Carriers in thinners	1, 2, 6, 7, 8	Ketones; Alcohols; Glycol ethers/esters	9a
			Wood protection oils	E.g. Teak oils, outdoor garden furniture treatment products, parquet oils	8	n/a	9a
Use in de-icing and anti-icing fluids	10133224459	14	De-icing products	E.g. Substances used in de-icing products for aviation, vehicles, conveyor belts, coal industry	n/a	Alcohols; Glycol ethers	4
Formulation & (re) packing of solvent based mixtures	11133171101	2	Inclusion of solvents as a component in mixtures/formulations	E.g. Blending of substances in solvents, also relevant for end use applications such as 'denaturants', and use in production of animal food and fodder.	All Hydrocarbon solvents	All Chemical solvents All Glycol ethers/esters	n/a
Use in fuel	11133171108	12	Catalytic lamp oils	E.g. Formulations that are combusted catalytically, Fragrance lamp oils, Perfume lamp oils	n/a	Alcohols	13
			Fuel additives	E.g. Carriers, dispersants used in fuel formulations	1, 2, 8	Ketones; Alcohols	13
			Fuels	E.g. Barbeques oils, Lamp oils, fire gels, lighter fluids, heater oils, acetone solvent	8	Ketones; Alcohols	13
Use in functional fluids	11133171109	13	Brake fluids	E.g. Brake fluids for automotive vehicles	n/a	Glycol ethers	17
			Coolants	E.g. Industrial heat exchangers, automotive	8		16
			Heat transfer fluids	E.g. Industrial heat exchangers, refrigerants, air conditioners	5, 8	n/a	16
			Hydraulic fluids	E.g. as blend component in all kinds of hydraulic installations	8	Ketones; Glycol ethers/esters	17
			Refrigerants	E.g. Refrigerants, air conditioners	5	n/a	16
Use in Laboratories	10133224502	17	Laboratory chemicals	E.g. General use of substance as laboratory chemical, glass rinsing/cleaning	Various hydrocarbon solvents, mostly pentane, heptane Toluene	Ketones; Alcohols	21
Use in lubricants	10133224452	6	Lubricant formulations	E.g. Carriers and solvents in all types of lubricating oils, e.g. engine oils, greases, metal working fluids (or: Use of HCS as carriers for additives used in the manufacture of finished lubricants.)	1, 2, 5, 8, 9	Alcohols	24
Use in process chemicals	17297180000	1	Catalyst deactivator, deashing agents	Process chemical e.g. agents, to inhibit reaction progress	n/a	Alcohols	20
			Dampening agent	E.g. Alcohols in nitrocellulose formulations	n/a	Alcohols	11
			Dyes, Pigments	Process chemical e.g. Dispersion agents, grinding aids, or Intermediate for dye production	Toluene, Xylene (dye manufacture)		34
			Explosives (nitrocellulose)	Process chemical e.g. Dampening agents, in extrudate processes	n/a	Ketones; Alcohols; Glycol ethers/esters	11
			Foaming control agents	Process chemical, e.g. carriers for defoamers or anti-foamers in e.g. paper manufacture	Cat 9: D100	n/a	
			Gas dehydration	Process chemical, e.g. water absorbents for gas drying.	n/a	n/a	
			Inhibitor	Process chemical, e.g. solvents, to inhibit reaction progress	n/a	Alcohols	20
			Intermediates	Intermediate e.g. for the production of e.g. bulk chemicals, fine chemicals, pharmaceuticals, fragrances, dyes etc.	1, 2	Ketones; Alcohols; Glycol ethers/esters	n/a
			Lub oil dewaxing	Extraction agent, e.g. to extract wax / paraffins from mineral oils, crude oils	n/a	Ketones	40
			Moisturizing agents	Process chemical e.g. process aids in the paper and leather industry, Humectants	n/a	n/a	
			Paper processing aids	Process chemical e.g. in sizing formulations, defoamers anti-foamers, wetting agents	n/a	n/a	
Photo chemicals manufacture	Process chemical e.g. for the production of toner, photo copy solvents	n/a	Ketones; Alcohols	30			
Photographic film manufacture	Process chemical e.g. for the manufacture of cellulose acetate or other resin bases	n/a	Ketones; Alcohols	30			

			<b>Pigment manufacture</b>	Process chemical, e.g. dispersion agents, carriers, grinding aids, metal pastes	1, 2, 7, 8	Alcohols; Glycol ethers	
			<b>Polymerisation processes</b>	Process chemical, e.g. process aids catalyst carrier, reaction media, reaction inhibitor, catalyst deactivators, Intermediate in polymerisation processes	5, 6, 8, 9	Alcohols	32
			<b>Chemical manufacture</b>	E.g. production of hydrogen peroxide	1, 2	n/a	n/a
			<b>Resin manufacture</b>	Process chemical e.g. in resin manufacturing process	1, 2, 8	Ketones; Alcohols; Glycol ethers/esters	n/a
			<b>Textile processing aids</b>	Process chemical e.g. substances used in e.g. de foamers anti foamers, wetting agents formulations	n/a	n/a	34
			<b>Extraction</b>	Extraction agents for use in production of e.g. seed oil, fragrances, proteins, caffeine and others.	6, 7	MEK, MIBK, Acetone, IPA	40
<b>Use in metal working fluids/rolling oils</b>	11133171105	<b>7</b>	<b>Metal working fluids</b>	E.g. Carriers, lubricating agents in metal working oils, rolling oils, cutting oils quenching oil formulations, metal surface treatment products	8, 9	n/a	25
<b>Use in mining chemicals</b>	10133224506	<b>22</b>	<b>Metal solvent extraction</b>	E.g. Diluent in metal solvent extraction processes	2, 6, 7, 8, 9	Ketones	40
			<b>Flotation</b>	E.g. Flotation frother	n/a	Ketones; Glycol ethers	20
<b>Use in Oil and gas field drilling and production operations</b>	11133171104	<b>5</b>	<b>Drilling and fracturing operations</b>	E.g. Base fluids, emulsifiers, shale inhibitors, other additives in drilling muds.	8, 9	Ketones; Glycol ethers	41
			<b>Oilfield chemicals</b>	E.g. Base fluids, well treatment products, shale inhibitors, lubricants, asphaltene inhibitors, demulsifiers	1, 2, 8	Ketones; Alcohols; Glycol ethers	41
<b>Use in road and construction products</b>	10133224500	<b>15</b>	<b>Bitumen Road repair, roofing</b>	E.g. Carriers for bitumen emulsions / solutions	1, 2	n/a	1
<b>Use in rubber production and processing</b>	10133224504	<b>19</b>	<b>Rubber processing aids</b>	Process chemical e.g. Compounding aids	3, 6, 7, 8, 9	n/a	20
<b>Use in polymer processing</b>	10133224507	<b>23</b>	<b>Polymer processing aids</b>	Process chemical e.g. Compounding aids	1, 2, 3, 4, 6, 7, 8, 9	n/a	32
<b>Use in water treatment agents</b>	9218173636	<b>21</b>	<b>Flocculant formulations</b>	E.g. Carriers in flocculant formulations	1, 2, 8, 9	n/a	37
<b>Uses in cosmetics/personal care products, perfumes and fragrances</b>	11133171110	<b>16</b>	<b>Cosmetics</b>	E.g. nail care, creams, shampoo, hairspray, makeup removal	8	DMK, IPA, MEK, MIBK	39
			<b>Skin cleaning preparations</b>	E.g. Substances used as excipient in skin cleaners, rubbing alcohols, skin wipes	6	IPA	39
			<b>Cosmetics</b>	E.g. Foams, mousses, sprays, fragrances	5	IPA	39
			<b>Cosmetics</b>	E.g. mascara, eyeliner, anti perspirants, creams	8	n/a	39
<b>Other</b>			<b>Pharmaceutical preparations</b>	E.g. excipients in pain relief preparations, rubbing alcohol preparations.	n/a	IPA	29

**Note 1:** These are examples of the solvent categories typically relevant for the identified applications and covered by each GES Title. Refer to your supplier for the names of specific solvents that are appropriate for each application. You may also review the list of Use Titles included within the REACH Registration for specific solvents via the ECHA Dissemination Portal (<http://echa.europa.eu/information-on-chemicals/registered-substances>).